

## HOP proposal

**Title:** Coordinated observation with CLASP sounding rocket

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### Abstract of observational proposal:

The Chromospheric Lyman-Alpha Spectro-Polarimeter (CLASP) sounding rocket is a high precision spectro-polarimeter designed to measure the Lyman-alpha Stokes profiles (I, Q, and U), and aims at inferring the magnetic field vector of the upper chromosphere and the transition region. CLASP team requests observing support from Hinode and IRIS to uncover the magnetic structure and dynamical state from the photosphere to the corona.

The launch date is scheduled for Sept. 3, 2015, and the current launch window is 17:16 - 18:16 UT. The CLASP will avoid the time periods when both Hinode and IRIS pass through the SAA, and the resulting launch window is tentatively 17:30 - 18:15 UT based on the current SAA prediction (this will be updated based on new orbit information before the launch). The flight time is about 5 minutes.

The target will be a quiet region near the solar limb. The 400-arcsec-long slit is set to perpendicular to the solar limb. The exact coordinates and the launch time will be informed before the planning.

We also would like to perform a rehearsal (testing of observing program, alignment check between Hinode, IRIS and DST) a few days before the launch.

### Request to SOT

[During launch window]

SP: Scan with fast mode: 5" x 164" (32 slit positions and 1024 pixel high), 2x2 binning, ~1min cadence (2 cycles (1.6 sec) at one slit position), single side mode

=> 510 Mbit/45min

BFI CaH: 111" x 111" (TBD), 2x2 binning, 8 sec cadence

=>780Mbit/45min

NFI NaID 5896 IV -160mA: 82" x 164" (TBD), 2x2 binning, 32 sec cadence

=>382.5Mbit/45min

Total data volume (during launch window): 1672.5Mbit/45min

\*The angle between CLASP slit and the solar N-S is not known until the observing region is determined. After the rough target selection about one week before the launch, FOVs of SP, BFI, and NFI will be determined.

[Before and after launch window]

SP: Full FOV scan with fast mode: 320" x 164" (2000 slit positions and 1024 pixel high), 2x2 binning, 2 cycles (1.6 sec) at one slit position, single side mode, 1H duration

=>600 Mbit/1H

### Request to EIS

[During launch window]

High cadence slit raster scan optimized for the quiet Sun observations.

[Before and after launch window]

One raster scan and slot observations for the wide FOV to obtain the context information of observing region.

We will prepare new EIS Studies with Hara san.

**Request to XRT**

[During launch window]

Al poly filter at less than 30 sec cadence to cover the CLASP SJ FOV of  $527'' \times 527''$ .

[Before and after launch window]

No request

**Other participating instruments**

IRIS: We would like to discuss the exact observing plans with IRIS team.

DST (IBIS & FIRS)